

Lightning round winners

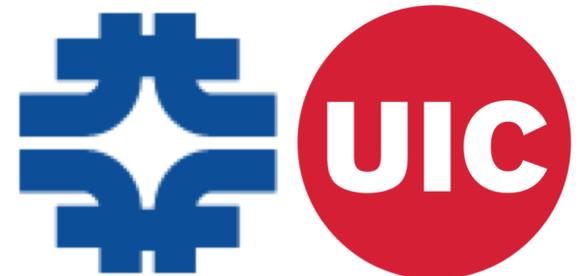
- Many thanks to our judges: Kevin Black, Yangyang Cheng, Cecilia Gerber, JoAnne Hewett, Young-Kee Kim, Hong Ma, Meenakshi Narain, Sal Rappoccio, Randy Ruchti,
- **Winners: Jennet Dickinson, Matthew Feickert, Julia Gonski, Christopher Hayes, Ken Long, Akshat Puri, Titas Roy, Jake Pasner, Mariel Pettee, Savannah Thais, Constantin Weisser**

Closing remarks

c. mills

USLUA Executive Committee

Annual meeting 2018



Discussion sessions

- New feature of the meeting this year
- Please let us know what you thought (survey forthcoming)

Outreach Kathryn Jepsen and Jahred Adelman

- Outreach is an essential part of our jobs, whether as faculty, postdocs or students. And it is not a simple skill, but rather one that takes lots of practice
- Informal science outreach in action! Nerd Nite at 7 p.m. at Half Sour at 755 S. Clark St. (downtown) – You may have a local Nerd Nite group

Calorimeters David Miller and Jim Hirschauer

- Nice discussion involving both experienced and junior members of ATLAS, CMS, and LHCb. We shared experience and lessons learned for radiation effects on active material and photosensors.
- Opportunities and challenges associated with having significantly more granular information available in the hardware trigger and offline for ATLAS and CMS.

Discussion sessions

Moving to CERN Julia Gonski and Darin Acosta

- Multifaceted challenges; formal and informal resources available (talk to your friends, group leader, experiment secretariat)

Machine Learning Nhan Tran and Sergei Gleyzer

- Focused on potential R&D opportunities for Run3 towards HL-LHC that would be impactful (analysis, reconstruction, trigger, tracking, fast simulation...)
- Good starting points for analyses that don't yet use ML and tips for new people starting out.
- Exploratory ideas like reinforcement learning, weakly and semi-supervised learning
- Benefit of expanding trigger applications, possible impact of non-classification applications such as regression and a greater need for dedicated hardware resources such as GPUs/TPUs/FPGAs for both training and inference.

Discussion sessions

Future colliders Ron Lipton and Anadi Canepa

- Opportunities to invest in substantial new projects ~2025
 - Strong interest in identifying funding opportunities for detector R&D (allowing for major contributions before projects will start)
- Concern that US funding balance too far toward projects (vs research)
- HE-LHC seems to be the most probable of the lot, ~late 2020 start
- Japanese decision on ILC is due this year. Positive decision could reshape plans for the 2020s
- Continued interest in 100 TeV scale hadron machines, and both circular and linear lepton colliders

Advocacy Yangyang Cheng and Sal Rappoccio

- In asking for congressional support of science funding, "all politics is local": the more the benefits are connected to the constituents the merrier
- Science advocacy is not and should not be limited to asking for funding alone; it should also include advocating for policies that facilitate scientific collaboration and against discrimination.

Discussion sessions

Tracking+timing Lindsey Gray and Jessica Metcalfe

- Integrated timing and tracking detectors enable next-generation experiments at ultra-high luminosities. Research avenues: further miniaturization of silicon sensors, fast front end ASICs, data processing on hardware, and the integration of the three

Diversity+inclusion Kevin Black and Meenakshi Narain

- Action items
 - gather resources
 - cultivate ambassadors /champions to support us and propagate awareness of biases (unconscious or otherwise)
 - share best practices across experiments
 - develop codes of conduct for your own groups
 - how to make training or dialogues about diversity mandatory?
- Question: how do we reach a majority who may be passive, or do not to acknowledge that biases exist or affect them... or do not care

Gratitude

Many thanks to

- Sonya Wright, Terry Grozis, and the rest of the CMS Admin team
- Marguerite from LPC for Vidyo wrangling
- Letty and the Taher & Clorica staffs
- FRA for their generous support
- Fermilab and the LPC for hosting us
- Harvey for his stewardship of the US-LUA

A large group of approximately 50 people, including men and women of various ages, are posing for a group photo. They are standing on a brick-paved walkway in front of a modern, multi-story building. The building features large glass windows and a mix of grey and blue panels. The sky is overcast. The text "... and to all of you for your participation" is overlaid in white at the top of the image.

... and to all of you for your participation

See you next year